PROJECT 200

THE LEVEL OF SUPERVISORY INVENTORY (LSI): 1. THE FIRST FOLLOW-UP.

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Under contract to

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The Level of Supervision Inventory (LSI)

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to

A project with the Ottawa Probation and Parole Officers

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The Assessment and Evaluation Project was initiated in the Ottawa offices by then Area Manager, Bill Jackson. Mr. Toffelmire and Dr. Birkenmayer agreed that the project had some interesting province-wide implications, so it became a formal joint project of the Community and the Research divisions of the Ontario Ministry of Correctional Services.

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Executive Summary

LSI-VI is a 58 item quantitative survey of attributes of offenders and their situations relevant to level of supervision decisions. Each item is in a "0 - 1" format and the total LSI score is the simple sum of checked items. The items are grouped as follows (with number of items in brackets):

Criminal History (10)
Education/Employment (10)
Financial (2)
Family/Marital (4)
Accommodation (3)
Leisure/Recreation (2)
Companions (5)
Alcohol/Drug Problems (9)
Emotional/Personal (5)
Probation Conditions (4)
Attitudes/Orientation (4)

The LSI items relate in reasonable ways to their subtotals and the subtotals are mildly and positively related. The inter-rater reliability estimates were satisfactory.

LSI scores predicted all of the following above chance levels: officer judgments of appropriate levels of supervision at intake; officer judgments of appropriate levels of supervision while in progress; officer judgments of the success of supervision; actual amount of supervision activity as reflected in Casebook entries; early terminations versus regular terminations; early closures versus active supervision; any evidence of inprogram recidivism, including charges pending and reconvictions; multiple reconvictions; incarceration; and, officially-undetected self-reported criminal activity. An institution LSI predicted failure to adjust at a Community Resource Centre and a presentence LSI predicted court dispositions. A brief version of the LSI was found to predict postprobation recidivism over a three-year postprogram follow-up and the predictive validity of the instrument was increasing over time.

The results are consistent with a number of other studies conducted by the Research Services division in Ontario. Given that background work and the current results with the LSI, the reliable and valid assessment of risk and need is clearly possible. The approach taken emphasizes the LSI as a decision-aid with professional judgments overriding the LSI guidelines. The LSI format has a built-in flexibility which will encourage its refinement as experience warrants. With or without refinements, the use of the LSI should be monitored.

The Level of Supervision Inventory (LSI) is one part of the Assessment and Evaluation System under development in Ontario Probation and Parole. The LSI is a convenient, standardized and quantitative record of information. The information recorded consists of those attributes of offenders and their situations considered important to level of supervision decisions. Level of supervision decisions were assumed to reflect considerations of the formal conditions of probation, risk (the probability of recidivism), need for services, and some additional factors which may be highly idiosyncratic and rare in their occurrence. The information may be obtained from interviews, official records and/or collaterals. Since there are differences among Ontario officers and offices in the use of official records and collaterals, it seemed premature to tie the completion of the LSI to any one strategy for obtaining information.

In order to enhance the utility of the instrument, several values guided its development. These values related to uniformity as a demonstration of consensus and fairness, professional concerns, an emphasis on comprehensive assessment, and the flexibility of the instrument.

Uniformity: The LSI provides a standard record of a reasonably comprehensive survey of attributes of offenders and their situations conducted prior to decision-making. The items are high consensus ones in the sense that professionals agree that the items, in total, are reasonable indicators of risk and/or need for service. Professionals agree that they and their peers do and ought to seek such information before making level of supervision decisions. Arguments can be expected over the details of selected LSI items, but such arguments are outweighed by the overall consensus that the total LSI score is the product of a reasonably comprehensive survey of offender characteristics. The uniformity issue relates to fairness in the exercise of discretion.

Nonlimiting. Officers seek and act upon information additional to that sampled by the LSI. The use of the LSI does not restrict the officer from collecting, storing and acting upon other information. In fact, no inventory of reasonable length could sample all possible relevant factors and their likely inter-dependencies.

Professional: "The officer makes the decision". The LSI is intended to function as an aid to professional decision-making. The decisions rest with the officer. With the LSI, professional judgments are not simply assigned a weight and then added to the risk/need score. When an officer notes special circumstances, professional judgment overrides the LSI guidelines. Within an ethical-legal framework, many consider it crucial that people and not checklists make decisions. In practice, asking officers to record the special circumstances which led them to question the LSI guidelines, provides a major means by which high consensus knowledge may grow in corrections: officer judgments recorded on earlier versions of the LSI were an important source of new items for later versions. As the research results demonstrate, officer notations of special circumstances are associated with significant decreases

(positive circumstances) or increases (negative circumstances) in the rates of recidivism which would be expected simply on the basis of the LSI guidelines.

Professional issues: "There is a body of knowledge in criminology". The LSI is the product of a fusion of professional expertise and systematic empirical research and theory in criminology. The content of the LSI reflects the experience of probation officers and the results of a number of studies conducted in Ontario and elsewhere. The fact that many of these studies sampled similar content in different ways and yet reported similar findings provides strong evidence that something concrete has been discovered about the sources of variability in recidivism. In technical terms, not only is there evidence in support of the predictive validity of measures of attributes of offenders and their situations but also strong evidence of convergent validity. As students of criminology, we can only work toward the day when measures of other potential sources of variability in recidivism - for example, attributes of the community or variations in criminal justice processing - reach such high levels of documented predictive validity.

Comprehensive. The discussion of uniformity and professional issues underscored the point that the LSI attempts to be a reasonably comprehensive record. The objective was not to produce an inventory with the minimum number of items required to best predict outcomes. Efficiency of prediction was judged less important than the reflection of consensus and the selection of useful items. A few highly predictive items may not reflect the fairest and most ethical grounds for making decisions. Many of the single best predictors of outcome are not particularly helpful when it comes to decisions about the targets of intervention; for example, being young, male and having a biological father with a criminal history may all predict recidivism above chance levels but they are unlikely to be targets of intervention (i.e.: these social historical indicators cannot be changed, rather the behaviour and/or situations of the offender are the targets of intervention, those things which can be changed). Finally, the theoretical component of the project strongly endorses the position that no one attribute of a person and/or his situation is crucial to understanding the probabilities of future criminal conduct. Rather, variations in the chances of recidivism may reflect variations in a large number and wide variety of incentives and disincentives for particular courses of action.

Flexibility. This report will review the quality of the empirical evidence regarding the validity of the latest version of the LSI, LSI-VI. However, strengths of the LSI approach include flexibility and a ready amenability to further development and refinement. The "zero-one" ("No - Yes") scoring format makes it very easy to add, delete or modify items when experience suggests that the modifications would increase the validity or utility of the instrument. Such changes can be introduced systematically. The LSI deliberately includes a number of "blank" items in order to encourage the systematic exploration of issues of local or more wide-ranging concern. Any officer, office or region may, over specified time periods or for a specified number of intake cases, begin to sample information relevant to improved predictability, the identification of gaps in services, or what-

ever their ingenuity and creativity leads them to be interested in. In other words, the LSI welcomes its ultimate displacement by instruments of documented superiority.

The following is a report on the psychometric and sociometric qualities of LSI-VI. Some details on the development of the LSI are reviewed with an emphasis on reliability and validity issues. Correctional services are like all other social service agencies in that any single indicator of validity or utility is imperfect. Thus, the emphasis will be upon the density of the empirical evidence supporting the validity of the LSI; that is, on the amount, variety and quality of empirical support. Item-by-item analyses (item-subtotal correlations and item-recidivism correlations) are appended, as is a note stating that there was no evidence that the weighting of LSI subtotals would be of any significant advantage.

Preliminary Development of the LSI

The LSI items were selected on the basis of reviews of recidivism studies conducted in Ontario[1] and elsewhere[2]. Through numerous consultations with Ottawa officers, an original interview schedule of some 30 pages was reduced to a single-sheet inventory with 62 "zero - one" items which would fit in the officers' case-books. Over the last year, the consultations have included training sessions with representatives of offices from each region of Ontario. Formal and informal inputs have come from the Research and the Training divisions and from a province-wide committee established by the Director of Probation to monitor and evaluate progress with the LSI. Valuable reports were also received from the Institutions branch, most notably the Psychology Unit of the Ottawa-Carleton Detention Centre.

The research sample. During the summer of 1980, the Ottawa officers began to use LSI-IV on a routine basis. The first 598 LSI's to be completed, coded and stored in the research files constitute the primary validation sample for this report. The total available LSI sample greatly exceeds that number but a review of probation files in February, 1982, revealed that the vast majority of remaining cases were still in progress. The sample is representative according to provincial norms on age (55% 20 years of age or younger), sex (83% male) and education (7% with more than high school education)[3].

Several additional samples will be referred to including a sample of prisoners[4]; a sample of presentence cases; a sample of Australian probationers and parolees[5]; and a special sample of probationers who were participants in an ongoing study of citizen volunteers in probation services[6].

Internal Consistency

It is not a psychometric necessity that the component parts of an inventory intercorrelate to a statistically significant degree. However, there is strong evidence from other studies that the many predictors of recidivism are at least mildly correlated. Thus, it would be surprising and even disturbing if the various parts of the LSI did not share reliable variance. Inspection of Table 1 reveals that the intercorrelations among the LSI-VI subscales are generally positive, mild to moderate in strength and statistically significant. The Probation Conditions subtotal shares least variance with the other scales, reflecting the fact that items on that subtotal are rarely checked. It is unusual for there to be clear evidence during early interviews that the 'Conditions' are not being complied with. However, the retention of the 'Conditions' subtotal in the LSI continues to make sense since a comprehensive survey relevant to level of supervision would normally include a review of the formal conditions of probation.

Table 2 is reproduced from the interim report on the LSI and shows the subtotal intercorrelations for the earlier LSI-V. A casual comparison of the tables will reveal that the additions and deletions conducted for LSI-VI had either no effect or strengthened the internal consistency estimates.

Inter-Rater Reliability and Temporal Stability

The richest evidence regarding the level of agreement among officers in their scoring of the LSI comes from training sessions. In training, one trainee enacts the role of "probationer" and another, the role of "officer" while all trainees complete an LSI. The overwhelming result: disagreements are virtually zero when assignment to minimum, medium or maximum supervision is the criterion. Another impression: disagreements are most likely with items from the Alcohol/Drug, Attitude, Emotional/Personal and Probation Conditions subsets. Discussion of those items will increase agreement rates but many do involve the recording of "structured" judgments. A third impression is that training will increase the readiness of officers to acknowledge a lack of necessary information by circling the numbers of those items where the information is too weak to allow a confident "zero - one" choice. An overall suggestion from training sessions is that some disagreements will be evident on some individual items even when officers are exposed to the same information. However, the total LSI scores assigned by different officers after exposure to the same interview are sufficiently stable to yield very high levels of agreement on level of supervision.

The original plan was to examine reliability in the rather artificial way of exposing officers to a few audio-taped interviews. These plans were abandoned when it proved possible to examine both inter-rater reliability and temporal stability under the actual conditions of LSI use[7].

Table 1

LSI-VI Subtotal Intercorrelations and Subtotal-Total Correlations

(n = 598 Intake Probation Sample)

		A	B	C	D	E	F	G	H	I	J	K	TOT[a]	TOT
A.	Criminal History		33	25	20	15	16	27	38	22	11	16	43	59
B.	Education/Employment			41	37	35	43	39	24	22	23	24	57	79
C.	Financial				27	28	18	15	19	21	14	11	42	49
New D.	Family/Marital					29	27	37	19	21	09	22	45	55
E.	Accommodation						16	27	17	12	12	11	38	46
F.	Leisure/Recreation							43	16	13	25	28	44	52
G.	Companions								20	17	27	38	51	60
H.	Alcohol/Drugs									20	20	18	38	59
I.	Emotional/Personal										04	24	32	43
J.	Probation Conditions											21	29	37
K.	Attitudes/Orientation												36	44

	A	B	C	D	E	F	G	H	I	J	K	TOT
Mean	1.35	3.68	.45	1.11	.44	.62	1.08	1.49	.60	.24	.24	11.29
(SD)	(1.52)	(2.82)	(.65)	(1.03)	(.78)	(.76)	(1.02)	(1.95)	(.95)	(.61)	(.66)	(7.47)

[a]Total does not include corresponsing subtotal.

Table 2

LSI-V Subtotal Intercorrelations: A Probation Sample (n=390)

		A	B	C	D	E	F	G	H	I	J	K	L		Tot	Tot[a]
A.	Criminal History		31	21	-02	25	12	13	33	39	18	09	22	A	55	40
B.	Education/Employment			43	18	36	31	41	36	22	24	17	21	B	77	53
C.	Financial				19	22	24	16	20	22	20	11	11	C	50	43
D.	Marital					12	12	21	16	08	19	01	17	D	34	20
E.	Family						35	24	33	15	14	12	17	E	52	40
F.	Accommodation							15	22	15	06	04	07	F	40	33
G.	Recreation								37	22	17	26	30	G	54	46
H.	Companions									20	19	28	39	H	61	51
I.	Alcohol/Drugs										15	24	15	I	56	36
J.	Emotional/Personal											12	25	J	43	32
K.	Probation Conditions												21	K	38	27
L.	Attitudes												—	L	43	36
	Total														—	—
PROB.	Mean	1.12	3.55	.49	1.73	1.06	.37	.63	1.15	1.43	.58	.30	.20	12.72	—	
(390)	(SD)	1.39	2.82	.67	1.13	1.10	.64	.76	1.11	1.77	.94	.87	.61	7.65	—	

[a] Total does not include corresponding subtotal.

Table 3 provides a summary of reliability estimates when one or both of rater and time varies. The tabled correlations are Pearson rs computed with the LSI-V total scores. Not surprisingly, the reliability estimates are generally high but decrease with increasing time intervals and when different raters are sampled. In the total of 97 decisions sampled by estimates "2" through "7", seven involved disagreements in the level of supervision assigned according to the LSI-V guidelines. In all but one case, the absolute difference between the LSI scores was five or less.

Estimate "8" in Table 3 provides an instructive example of the combined effect of possible variation associated with raters, time and the situation of assessment. The correlation between LSI scores obtained at the presentence stage and again several months later in prison was a respectable .80. However, in six of the nineteen cases, there was a disagreement in the level of supervision which would have been assigned at probation intake using the LSI-V guidelines. (Note: This sample did not receive probation.) As will be seen, there is strong evidence for the validity of both probation LSIs and the prison LSIs and there is no evidence to suggest that one score was more "true" than the other. However, what is "true" may change over time and LSI scores may be susceptible to the specifics of the situation of assessment.

An indirect but important source of evidence regarding the reliability of LSI scores is the stability of mean scores and the stability of average differences among scores when such averages are computed for randomly composed sets of officers. As reported in the interim review of the LSI, two randomly composed sets of officers were formed within each of the Ottawa offices: there were no significant differences in the mean LSI scores or in the variance of LSI scores associated with officers within either of the Ottawa offices.

The available evidence regarding the reliability of LSI scores is positive overall but not definitive. Reliability is subject to deterioration should enthusiasm for the approach wane or should officers begin to feel too comfortable with the approach. It appears from the experiences of the Ottawa West and Belleville offices that the team model has advantages with respect to keeping the reliability issue in the forefront. Officers working in more traditional offices may find that monitoring their own performance on certain key dimensions may help keep the reliability issue alive:

a) "if my recording of "special circumstances" occurs less than 10% of the time, am I depending too much upon the LSI?";

b) "if I am not circling any items as "unknown", does this mean that I am making too many assumptions or does it reflect careful and complete assessment?"; and,

Table 3

Stability of LSI Scores Over Time and Raters

Estimate #	Rater	Average Time Difference	r	(n)	Comments
1	Different	None	"High"	(≈32)	Same interview rated by PPO trainees (see text).
2	Different	None	.94	(5)	Same interview rated by PPO and Psychology Intern.
3	Same	(Less than 1 month)	.99	(16)	PSR LSI-Probation LSI (Office 1)
4	Same	(Less than 1 month)	.96	(22)	PSR LSI-Probation LSI (Office 2)
5	Same	(Less than 1 month)	.95	(25)	PSR LSI-Probation LSI (Office 2)
6	Different	(Less than 1 month)	.88	(15)	PSR LSI-Probation LSI (Office 1 and 2)
7	Different	(One or two months)	.87	(14)	Initial Probation LSI and Psychologist's LSI completed upon referral.
8	Different	(Two months or more)	.80	(19)	PSR LSI-Institution LSI completed upon application for CRC.

c) "am I bothering to complete the "0 - 3" rating scales where requested on the LSI?".

The LSI and Agreements with Other Sources of Similar Information

The LSI is obviously not the only approach to obtaining and quantifying information on criminal history and the other areas of concern represented by LSI subtotals. An expectation is that the LSI subtotals should correlate with other measures of similar underlying areas of concern. Another project in the Ottawa offices includes a large battery of measures based on interviews, ratings and self-report attitude and personality scales[6]. The information derived from research interviews with the first 91 probationers was rescored according to the LSI manual and their LSI scores examined in relation to some alternative measures.

LSI Criminal History in comparison with the other LSI subtotals was the single best predictor of self-reported prior criminal activity (r = .28, $p < .001$) and the single best predictor of the value probationers assigned to the rewards unique to crime (.27).

LSI Education/Employment was the best predictor of Awareness of Limited Opportunity (.24), Inadequacy-Immaturity (.24), of the number of conventional roles enacted (-.34) and, of course, last grade completed (-.41).

LSI Family was the strongest LSI correlate of Family Dissension (.16) and of repeated disregard for conventional rules and procedures (-.25, Socialization; .22, Psychopathy).

LSI Alcohol/Drugs was the best predictor of self-reported number of drug offences in the last six months (.40).

Ties to Offenders was best predicted by LSI Accommodation (.16) and, surprisingly, was unrelated to LSI Companions. LSI Companions also samples ties to "straight" others and it was the best predictor of the value assigned the rewards associated with a "straight" life (-.26).

LSI Personal/Emotional correlated with a number of indicators of alcohol/drug problems and was the best predictor of Sensation-Seeking (.17) and Self-Control (-.16).

The LSI Attitude scores did not correlate significantly with more traditional approaches to measuring criminal sentiments. Rather, the LSI Attitude scores were a reflection of the probationer's personal confidence (Self-Esteem, .20; Neuroticism, -.24).

With some exceptions, it is clear that the LSI subtotals — while mildly intercorrelated — are tapping essentially different attributes of probationers and their situations. In brief but technical terms, the subtotals have some documented differential validities as well as concurrent validity.

The LSI and "Appropriate" and "Actual" Levels of Supervision

The Queensland Probation and Parole Services of Australia is reviewing the LSI for possible adoption. LSIs were completed on 355 cases currently under supervision. Employing the LSI-V guidelines, there was 70 percent agreement between LSI scores and the actual level of supervision offered.

In Ottawa, the agreement rate is 90 percent at the time of original decision. The officers are noting special circumstances which might result in a deviation from the LSI guidelines in only ten percent of the cases: five percent because of positive circumstances and five percent because of negative circumstances. This figure of 10 percent should not be thought of as a serious error. I would begin to worry if, in practice, there was evidence that professionals were not exercising the discretion which is inherently theirs.

The files of Ottawa West cases were reviewed to develop an indicator of the actual amount of supervision activity associated with individual cases. A simple, straight-forward but imperfect indicator was the number of entries in the Record of Case Supervision. The correlation between LSI-VI scores and entries was .40, $p < .001$, [n=341; the mean number of entries was 13.36 (SD=10.37)]. The correlation between LSI-V scores and entries was .38. The correlations were positive and statistically significant among cases still in progress (.23, n=60), among those presenting evidence of new charges (.22, n=77), and those reaching a regular termination (.41, n=50). The correlation was not statistically reliable in the early termination sample (.07, n=60), most likely reflecting the miniscule variation in number of entries left to be accounted for, once policy factors were considered. The mean number of entries for the early termination sample was 8.28 (SD=4.34): three of these contacts are prescribed by policy in Ontario and at least one entry is required to note the early termination

Other indicators of the level of supervision actually received, relative to the formal period of supervision prescribed by the court, are early termination (a formal early termination granted by the court) and administrative closures and/or assignment to a form of privileged reporting (for example, reporting by mail). Table 4 reveals that the proportion of early terminations relative to regular terminations decreased with LSI-VI scores. Similarly those cases unofficially closed relative to those still active could be distinguished on the basis of LSI-VI scores. Note that in the coding of inprogram outcomes, any evidence of recidivism, including

Table 4

LSI-VI and the Prediction of Favourable Early "Closures"

	TERMINATIONS					IN PROGRESS					TOTAL	
	Early		Regular		(Tot)	"Closed"		"Active"		(Tot)	Early or "Closed"	Tot
	%	(f)	%	(f)	(n)	%	(f)	%	(f)	(n)	% (f)	(n)
24+	0.0	(0)	100.0	(14)	14	10.0	(1)	90.0	(9)	10	7.1 (1)	14
12-23	29.4	(15)	70.6	(36)	51	21.3	(19)	78.7	(70)	89	24.3 (34)	140
8-11	45.0	(18)	55.0	(22)	40	34.7	(17)	65.3	(32)	49	39.3 (35)	89
0-7	56.4	(53)	43.6	(41)	94	58.1	(61)	41.9	(44)	105	57.3(114)	199
	45.5	(86)	54.5	(103)	189	38.7	(98)	61.3	(155)	253	41.6(184)	442
LSI Mean	6.83		10.43			7.44		12.29				
[MS Error (df=553)] [a]			[42.473]									
"t" ($p <$)	3.78(.01)					5.77(.01)						

[a] See footnotes to Table 7 for the overall ANOVA.

charges pending, took priority over "early" closures. In other words, the early closures are assumed to reflect the officer's judgment that no further service was required and/or that performance and situations were deemed satisfactory.

This study did not monitor officer judgments of progress during the course of supervision. However, officer ratings of the success of supervision were coded when such judgments were recorded on the Record of Case Supervision at termination. Table 5 presents the ratings of "success" and "failure" by LSI-VI scores and reveals that officer judgments of success at termination decreased as the LSI-VI scores increased.

The evidence is strong regarding the correspondence between LSI scores and the level of supervision officers judged appropriate and the amount actually received. This is a confirmation of earlier research in Ontario which documented the link between the sort of information with which officers normally work and their decisions regarding level of supervision[8]. Discretion is being exercised in probation services, but it is far from a random process. The exercise of discretion can now be shown to reflect reasonably comprehensive reviews of each case along with the ethical-legal necessity of human judgment.

Ongoing work with the Supervision Progress Inventory, another component of the Assessment and Evaluation Project, will reveal the extent to which changes in level of supervision during the course of supervision also reflect changes in the situations of probationers.

The Presentence LSI and the Prediction of Disposition

While not forming part of the formal report to the court, the Ottawa officers have been completing an LSI on Presentence Report (PSR) cases. The dispositions of 131 cases were drawn from office files and the mean LSI-V scores compared for four groups: those who received prison sentences, those who received periods of probation for two or more years and less than two years, and those who were acquitted, fined or given a suspended sentence without supervision. Table 6 reveals a clear positive relationship between LSI-V scores and severity of disposition, $F\ (3/127) = 2.98$, $p < .03$. Among the subscales, Criminal History ($p < .003$), Education/Employment ($p < .02$) and Financial ($p < .04$) were the strongest predictors of disposition.

Additional evidence regarding the predictability of dispositions comes from Australia where they found a positive relationship between LSI scores and length of the probation order.[5]

There is no suggestion from the above that the LSI scores ought to be the major factor associated with court dispositions. Obviously, the bench must take a number of considerations into account in sentencing other

Table 5

Officer Ratings of the Success or Failure of Supervision at Termination by LSI-VI Scores

	Success		Failure	
	%	(f)	%	(f)
24 +	50.0	(2)	50.0	(2)
12-23	65.5	(19)	34.5	(10)
8-11	85.0	(17)	15.0	(3)
0-7	93.3	(56)	6.7	(4)
Totals	83.2	(94)	16.8	(19)
r (p<)		.35 (.00008)		

Table 6

A Presentence LSI and the Prediction of Disposition

	PROBATION				
	Prison	2 Years	2 Years	Fine, S.S. Acquittals	
n	26	39	59	7	
Mean	17.46	15.95	13.71	8.86	
SD	9.31	8.18	6.78	8.71	Eta = .26

than risk/need. If the LSI was to be introduced in a formal way at the PSR stage, attempts to score offence and aggravating versus mitigating circumstances might be made. An LSI for formal use at the court level might also be considered most appropriate if based only on items reflecting matters of official record. These are issues for review before a formal role of the LSI at the presentence stage can be established.

The informal use of the LSI at the presentence stage has already been highly suggestive. There is the distinct sense among some Ottawa officers that their presentence reports are becoming more prescriptive with reference to useful conditions of probation. In addition, for very low risk/need cases, officers are more ready to state that probation supervision would serve little purpose with reference to crime control However, a systematic comparison of PSRs before and after the introduction of the components of the Assessment and Evaluation System has not been conducted.

The Prediction of Official Recidivism

Five hundred sixty-one of the 598 cases included in the report could be assigned to one of the eight levels of outcome status represented in Table 7. Note that the recidivism categories include technical violations because, for a level of supervision inventory, officially-recognized violations of the conditions of probation constitute highly meaningful events. The overall correlation of .47 found between LSI scores and inprogram outcome status is, to this author's knowledge, a level of predictability unprecedented in the correctional literature. The mean LSI score of those with favourable reinvolvements with the court (early termination) falls almost two standard deviations below the mean LSI score of those with unfavourable reinvolvements with the court (a reconviction leading to incarceration). The latter category included only those cases with a disposition of at least 15 days of uninterrupted incarceration. Recidivists receiving probation with "no reporting" were assigned to the "no additional supervision" category.

Recall that Table 4 showed that LSI scores distinguished between "early" and "regular" closures. Table 8 shows that the LSI reliably distinguishes between recidivists and nonrecidivists, overall and within the subsample with official outcomes and that subsample still in progress. Ninety percent of the inprogram recidivists had intake LSI-VI scores which fell outside of the minimum supervision range. Seventy-six percent of the inprogram recidivists fell in the maximum supervision range.

A useful prediction instrument would be one which identifies not only those who are most likely to become regularly reinvolved with the court but also those who become reinvolved in more frequent and serious criminal activity. There is an emerging suggestion that those recidivists with multiple reconvictions represent a particularly significant subsample: they may well be an identifiable group which has an effect on community-wide crime rates.[9] Table 9 reveals that 100 percent of the recidivists (n=27) with more than one reconviction had LSI-VI scores outside the minimal super-

Table 7

Outcome Status at the End of the First Inprogram Follow-up By LSI-VI Scores

	EARLY		REGULAR		RECIDIVISM (Disposition)				
	Term.	"Closure"	Term.	"Active"	Without Added Superv.	Added Prob.	Charges "Pending"	Incarcer-ation	Totals
24+	0.0 (0)	2.9 (1)	11.4 (4)	25.7 (9)	2.9 (1)	11.4 (4)	25.7 (9)	20.0 (7)	35
12-23	7.1(15)	9.1(19)	17.1 (36)	33.3 (70)	3.3 (7)	8.1(17)	10.5(22)	11.4(24)	210
8-11	17.1(18)	16.2(17)	20.9 (22)	30.5 (32)	1.0 (1)	4.8 (5)	7.6 (8)	1.9 (2)	105
0-7	25.1(53)	28.9(61)	19.4 (41)	20.8 (44)	2.4 (5)	1.4 (3)	1.9 (4)	0.0 (0)	211
Totals	15.3(86)	17.5(98)	18.4(103)	27.6(155)	2.5(14)	5.2(29)	7.7(43)	5.9(33)	561
LSI Mean	6.83	7.44	10.43	12.29	12.43	14.83	16.72	19.64	11.17
SD	5.31	5.18	6.83	7.09	7.70	7.09	7.21	7.14	7.42
% of Cases in:									
Max(12+)	17.4	20.4	38.8	51.0	57.1	72.4	72.1	93.9	44
Med(8-11)	20.9	17.3	21.4	20.6	7.1	17.2	18.6	6.1	19
Min(0-7)	61.6	62.2	39.8	28.4	35.7	10.3	9.3	0.0	37

Notes: a) A test of the overall statistical significance of the differences in mean LSI-VI scores by Outcome Status: $F\ (7/553) = 24.69$, $p < .00001$.

b) The correlation between LSI-VI scores (not recoded) and the eight levels of Outcome Status: $r = .47$, $p < .00001$. (The order of "Probation" and "Charges Pending" were reversed in the Outcome measure actively employed in the computation of r.)

Table 8

The Prediction of Inprogram Recidivism

	Any Evidence		Reconvictions[a]		Charges Pending[b]	
	%	(f/n)	%	(f/n)	%	(f/n)
24 +	60.0	(21/35)	75.0	(12/16)	47.4	(9/19)
12-23	33.3	(70/210)	48.5	(48/99)	20.0	(22/111)
8-11	15.2	(16/105)	16.7	(8/48)	14.0	(8/57)
0-7	5.7	(12/211)	7.8	(8/102)	3.7	(4/109)
Totals	21.2	(119/561)	28.7	(76/265)	14.5	(43/296)
r	.38		.46		.31	
% of Recidivists with LSI Scores of 8 or greater	89.9		89.5		91.7	

[a]Among cases with "official" outcomes.

[b]Among cases still "in progress".

Table 9

LSI-VI and the Prediction of Number of Reconvictions and Severity of Disposition Among Official Recidivists

	More than one Reconviction		Disposition: Additional Probation		Disposition: Incarceration		
	%	(f)	%	(f)	%	(f)	n
24 +	66.7	(8)	33.3	(4)	58.3	(7)	12
12-23	37.5	(18)	35.4	(17)	50.0	(24)	48
8-11	12.5	(1)	62.5	(5)	25.0	(2)	8
0-7	0.0	(0)	37.5	(3)	0.0	(0)	8
Totals	35.5	(27)	38.2	(29)	43.4	(33)	76
r ($p <$)	.40 (.0008)		.39 (.0002)				
% of Cases with LSI-VI Score of 8+	100.0		89.7		100.0		

vision range. Ninety-six percent of that interesting group fell in the maximum supervision range according to the LSI-VI guidelines.

With a few exceptions, dispositions involving additional supervision (probation or incarceration) may be assumed to reflect frequent and/or serious criminal activity. Table 9 reveals that over 90 percent of the recidivists who were given additional supervision had LSI scores falling outside the minimum range. In the case of the incarcerate cases, the corresponding figure was 100%, with 94% falling in the maximum supervision range according to LSI-VI guidelines.

A recurring and serious problem in the prediction of criminal behaviour is that of the number of "false positives", that is, the number of potential recidivists identified who in fact present no evidence of recidivism. Referring back to Table 8, it was the case that nearly 90% of the recidivists were in the medium or maximum categories (that is, 107 of the 119 recidivists). The apparent problem is that 350 of the 561 cases had LSIs which placed them outside of the minimum supervision range. In brief, in order to correctly identify 107 of the 119 inprogram recidivists, 243 nonrecidivists were identified as medium or high risk cases. In one sense, the number of "correct" predictions was grossly outweighed by the number of "incorrect" predictions.

In probation, it is reasonable to argue that many of the apparent errors in prediction are not of great importance. Those nonrecidivists who fell outside of the minimum range were either under active supervision, "unofficially closed", or had attained a "court-sanctioned" early or regular termination. None of these categories of outcome are obviously inconsistent with a mandate of probation supervision: that is, the ethical, humane and economical management of the criminal penalty with due consideration to crime control. From this point of view, the only serious error involved in the identification of low versus moderate and high risk cases was the failure to correctly identify the 12 recidivists whose LSI scores fell in the minimum range. Table 9 has shown that these 12 were responsible for no more than one reconviction each and that none of these new crimes were judged serious enough to warrant incarceration when community programs provided a reasonable alternative.

An extension of this line of reasoning suggests that the single most informative estimate of the predictive validity of an assessment instrument in probation is its ability to distinguish between highly favourable (early termination) and highly unfavourable (incarceration) reinvolvements with the court. Table 10 presents the distribution of early termination and incarcerated cases over the LSI-VI categories. The correlation was .70. While none of the minimum cases were incarcerated, 33 of the 86 early termination cases (38 percent) did fall in the moderate and high-risk categories. Even these apparent errors in prediction appear less serious when the possibility is granted that the relatively higher levels of supervision offered these cases was in part responsible for the progress which resulted in evidence sufficient to support a recommendation of early termination. (Logically, although I think less reasonably, it is possible

Table 10

LSI-VI and Highly Favourable *versus* Highly Unfavourable Reinvolvement with the Court

	Early Termination		Reconviction(s) Leading to Incarceration		
	%	(f)	%	(f)	n
24 +	0.0	(0)	100.0	(7)	7
12-23	38.5	(15)	61.5	(24)	39
8-11	90.0	(18)	10.0	(2)	20
0-7	100.0	(53)	0.0	(0)	53
Totals	72.3	(86)	27.7	(33)	119
r (*p* <)		.70 (.00001)			
% of Cases with LSI Score of 8+	38.4		100.0		

to argue that relatively intensive supervision contributed to the criminal activity of the moderate and high-risk cases. This point will be discussed later.)

The Prediction of Self-Reported Criminal Activity

No matter how the data were sliced, there was moderate to strong and highly consistent evidence that LSI-VI scores forcast the official (court-sanctioned) and unofficial (in progress) outcomes of supervision. Since the LSI was in part constructed to reflect high consensus knowledge, there is the question concerning the extent to which the predictive validity estimates were inflated by the "bias" inherent in such high consensus "knowledge". What is required is evidence that the criminal activity of probationers, measured independently of reports by criminal justice personnel, is related to LSI scores. There is no perfect way of obtaining such information but self-reports of officially undetected criminal activity are known to possess some moderate degree of reliability and validity.[10] Table 11 presents the predictive relationship between LSI scores and self-reported criminal activity, derived from that previously described sample of 91 probationers participating in another project in the Ottawa offices. The self-report criminal activity scale sampled 32 different offences and their frequency of occurrence (zero through three or more times) in the first six months of probation. For both the total measure and a subscale reflecting property offences, the amount of criminal activity increased with LSI scores. The LSI did not successfully forecast self-reported offences against persons (primarily violent) although it is noted that very few confessed to committing such offences. Table 11 also reconfirms the relationship between LSI and official recidivism.

The LSI and Officer Judgments of Special Circumstances

On ethical-legal and professional grounds, it was considered important that officer judgments should override the LSI guidelines. As previously noted, officers are recording "special circumstances" on the LSI in 10 percent of the cases, generally five percent "positive circumstances" and five percent "negative circumstances". When officers noted positive circumstances ($n=16$), the inprogram recidivism rate was 19 percent relative to an overall rate of 41 percent ($n=322$) (when evidence of recidivism was compared with a regular or early termination). When officers noted "negative circumstances" ($n=15$), the inprogram recidivism rate jumped to 60 percent. The Tau Bs for Recidivism (0 - 1) by Special Circumstances (No - Yes) were statistically significant at the .07 level for positive circumstances and at the .03 level for negative circumstances.

The Prediction of Postprogram Recidivism

A postprogram follow-up of probationers with a full LSI-VI has not

Table 11

The "Selection and Training Project" LSI and the Prediction of Officially Detected and Undetected/Self-Reported Recidivism

% of Non-circled LSI Items Checked	Any Official Evidence of Recidivism		Mean Number of Self-Reported Criminal Acts (Last 6 Months)		Mean Number of Self-Reported Property Offences	
	%	(f/N)		(n)		(n)
22.9 +	24.3	(9 of 37)	9.11	(26)	1.73	(26)
16.3-22.8	16.7	(3 of 18)	8.75	(16)	1.62	(16)
0-16.2	8.3	(3 of 36)	4.83	(30)	0.60	(30)
	16.5	(15 of 91)	7.35	(72)	1.24	(72)

Table 12

A Brief LSI in Relation to Recidivism: Inprogram, Postprogram and Any Reconvictions Following a Three-Year Postprogram Follow-up Period (The CaVIC Sample)

CaVIC LSI	n	% of Total	Inprogram Prop.	Inprogram (f)	Postprogram Prop.	Postprogram (f)	End of Follow-up Prop.	End of Follow-up (f)
8-9	18	9.7	.56	(10)	.50	(9)	.78	(14)
6-7	69	37.3	.29	(20)	.36	(25)	.52	(36)
4-5	63	34.0	.14	(9)	.23	(15)	.30	(19)
2-3	27	14.6	.14	(4)	.00	(0)	.14	(4)
0-1	8	4.3	.00	(0)	.00	(0)	.00	(0)
			($\underline{r}$ .27)		($\underline{r}$ .37)		($\underline{r}$ .41)	

been completed, as too few cases have been off probation for an adequate period of time. A three-year postprogram follow-up was conducted for the CaVIC (Canadian Volunteers in Corrections) sample of probationers and a brief version of the LSI has demonstrated predictive validity. Table 12 reveals the consistent positive relationship between LSI scores and recidivism, with the estimates of predictive validity increasing with duration of follow-up. Rogers' presented similar results with a much larger province-wide sample of probationers.[3]

In the total CaVIC battery of various psychometric and sociometric predictors, the brief LSI was the single strongest predictor of recidivism. However, as might be expected, the addition of attitude and personality scales to the prediction formula did increase the predictability of recidivism to levels above that yielded by scores on the brief LSI. During the inprogram phase, the LSI-recidivism correlation was .27 while the multiple correlation (including psychometric assessments) was .39; postprogram, .37 versus .46; total follow-up period, .41 versus .49.

Some Validity Information on the LSI with Institutional Samples

Dr. Jim Bonta, psychologist at the Ottawa-Carleton Detention Centre, has been employing LSI-IV in his ongoing study of the predictors of successful adjustment to Community Resources. Dr. Bonta kindly supplied us with the results from a preliminary analysis of the first group of cases on whom LSI data were available. In a battery which included 24 psychometric scales, the LSI score was the single best predictor of failure to adjust to a Community Resource Centre (CRC) ($.40$, $p < .001$). The difference between the mean LSI scores of the successful and unsuccessful cases was impressive, representing a difference of a full standard deviation: successful (12.76) versus failure (20.35), $F\ (1/69) = 11.90$, $p < .001$.

The LSI and Differential Supervision

The inprogram data provide rather convincing evidence in total that the LSI is functioning as an effective risk/need inventory. The LSI scores demonstrated predictive validity well above chance levels when we looked at officer judgments of appropriate levels of supervision; various indicators of actual level of supervision; favourable early closures; officer ratings of success; evidence of any recidivism; and, evidence of frequent and serious criminal activity (officially and unofficially defined).

Officers or offices deciding to work primarily with cases who are at risk and in need of services, will find the LSI of assistance in identifying the appropriate cases. What is not yet available from any jurisdiction is totally convincing evidence that such a strategy of differential supervision will be rewarded by increased effectiveness with reference to crime control. However, what is utterly without support in the systematic empiri-

cal literature is the pronouncement heard from time-to-time regarding the "YAVIS syndrome" or the "casework paradox": in brief, it is only the "young, attractive, verbal, intelligent, successful" (or low risk/need cases) who profit from psychosocial services. Such pronouncements are made when it is discovered that low-risk cases in any program have better outcomes than the high-risk cases in the same program.

A logical possibility is that the low-risk cases may have done as well without any services while it was the higher-risk cases who were profiting from services. The systematic empirical literature even includes examples of how the involvement of low-risk cases in service programs may increase their chances of recidivism.[11] An exhaustive survey of the literature on differential supervision strategies has not been conducted but at the present time the weight of the evidence appears to favour the following conclusion: when intensive services are found to be superior to less intensive services, the evidence will be stronger among samples of higher-risk cases than among lower-risk cases. Wisconsin[12] reported such results in probation and parole; similar results were found in the CaVIC study[13] and in an exploration of an employment program for prisoners.[14] The quality of supervision is also an issue and the CaVIC results suggested that relatively high levels of authority, problem-solving and advocate-broker activity were all more strongly related to reduced recidivism among the higher-risk probationers than among the lower-risk probationers.

Risk/need scores such as the LSI open up the opportunity for the systematic exploration of differential supervision strategies.

Summary

The LSI provides a convenient, standardized and quantitative record that a reasonably comprehensive survey of attributes of offenders and their situations has been conducted prior to decisions being made regarding level of supervision. As an assessment instrument, its component parts are mildly and appropriately related, and several indices of reliability estimated in the actual situation of use were satisfactory. The content reflects consensus among professional probation officers, draws upon an extensive body of previous research, and the content links with a broad social-learning perspective on criminal conduct. The subtotals of the LSI were found to be related to an alternative set of measures which purport to measure similar areas of concern.

The inprogram predictive validity data suggested the LSI was doing almost everything that one might expect an effective risk/need scale to do. The LSI guidelines matched the level of supervision decisions considered appropriate by professionals both at the time of the original decision (90 percent agreement) and during the course of supervision (70%). The LSI also predicted officers' ratings of the success of supervision received ($r = .35$).

LSI scores predicted the actual amount of supervision activity as measured by number of entries in the Record of Case Supervision ($r = .40$) and by early *versus* regular termination ($p < .01$) and early closures *versus* active status ($p < .01$).

The LSI guidelines correctly identified 90 percent of the inprogram recidivists and did so for those with official reconvictions and those with new charges pending. The LSI also predicted officially-undetected self-reported criminal behaviour. Within the official reconviction sample, 90 percent of those receiving dispositions involving additional supervision were correctly identified. Within that reconviction sample, 100 percent of those with more than one reconviction and 100 percent of those incarcerated were correctly identified by the LSI. The correlations between LSI scores and various measures of inprogram recidivism varied from .31 to .70. The latter estimate is probably the most informative estimate in that it reflects the ability of the LSI to distinguish between those with highly favourable and those with highly unfavourable reinvolvements with the court (early termination *versus* incarceration upon a reconviction). When probation is viewed as an alternative to incarceration, outcomes such as regular termination, "inprogram" or even reconvictions for relatively trivial offences are seen to be relatively neutral outcomes and thus, perhaps, non-serious errors of prediction.

The LSI samples high consensus information but no single instrument could sample all possible information relevant to level of supervision decisions. For this and other reasons, professional judgments override the LSI guidelines. In practice, officer notations of special circumstances did have predictive validity. Similarly, the addition of traditional psychometric measures increased the predictability of recidivism over and above that yielded by the LSI. The LSI was never intended to be the only source of information and alternate or additional sources are indicated whenever professional judgment so suggests.

Several areas for investigation were noted, in particular, a post-probation follow-up has yet to be conducted with a sample on whom the full LSI has been completed. The greatest need is for studies which document the conditions under which differential supervision strategies are effective. There are reasonably solid grounds for predicting that it is those moderate-to-high-risk cases and the communities in which they live which will profit from special attention being paid to the higher-risk cases. Bonta's work with a CRC sample suggests that the LSI may have a valuable role to play in institutions. Similarly, further work is indicated at the court level regarding the role of the LSI at the presentence stage. LSI scores and severity of court dispositions are related and there is now the possibility of conducting sophisticated non-experimental comparisons of the relative effectiveness of dispositions.

Within the Ottawa area, the predictive validity of LSI scores was relatively stable across the two offices, and for probationers who differed

in their ages, sex and criminal history. However, the validity of LSI scores may be found to vary as a function of attributes of the communities in which offices are located and/or as a function of other characteristics of the probationers served. The LSI approach is sufficiently flexible to encourage the exploration of the implications of variations in community attributes, probationer attributes and, for that matter, officer and manager attributes.

The LSI was designed so that it may be easily modified as experience warrants. Should the LSI go into wide-spread use, mechanisms will be required to monitor its continuing level of utility and to ensure that modifications are planned rather than haphazard.

Footnotes

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   Note: The work of Jenkins and colleagues was of particular value in suggesting important items and in demonstrating the potential of "zero - one" scoring. As the project progressed, more was learned of the massive effort by Wisconsin; for a few items, their rating system was adopted without modification.

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4. Bonta, James (Personal communication).

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11. For example, the "non-delinquent" sample in O'Donnell et al. (1979).

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APPENDIX

Some Item-by-Item Analyses with Comments

LSI-IV included age and sex items, two of the better known and most consistent predictors of recidivism. However, there was a strong sense that the relevant information carried by age and sex items was already being tapped by other items. Thus, the inclusion of age and sex were serving only to decrease social validity by making the LSI appear both ageist and sexist. In the first year of the project, samples of LSI-IVs were rescored excluding the age and sex items resulting in no changes in the levels of supervision assigned. Neither LSI-V or LSI-VI include age and sex items.

LSI-IV and V included five items having to do with marital status. The marital status items were the focus of many discussions among Ottawa officers, were questioned by trainees, troubled our Australian colleagues and functioned poorly in the interim examination of internal consistency. For the record: LSI-V items D20 (Unmarried, legal) and D21 (Unattached, social) did distinguish between early terminations and recidivists, (Tau Bs: .24 and .18 respectively), while LSI-V items D22, D23 and D24 were not reliably predictive of outcome. Marital status is not scored on LSI-VI although a new item reflecting satisfaction with one's marital situation has been added to create a new subtotal of Family/Marital. The change has had no significant impact on the predictive validity of the LSI but does improve its internal consistency and user acceptability.

Two other LSI-V items which do not appear on LSI-VI are the old I48 and K54d. These items were rarely checked and, hence, could not be shown to be predictive of recidivism. (I48: Alcohol/Drug Problems included "Other"; K54: Improvement in Behaviour/Situations indicated on Probation Conditions "d".)

LSI-V Item 25 (Early Family Instability) does not appear on LSI-VI. Generally, Ottawa officers and the trainees found the item more complicated than it was useful. The item was predictive of recidivism, Tau (.23).

A major difference between LSI-V and LSI-VI is the greater attention paid criminal history in the latest version. LSI-VI includes three new items reflecting criminal history: two or more prior convictions (adult); three or more prior convictions (adult); three or more present offences. The addition of the items increased the predictive validity extimates (Eta) for subtotal Criminal History to .44 from .40. However, the rationale was not so much improved predictive validity but the sense, among Ottawa officers and Ontario trainees, that criminal history deserved a greater weight.

Overall, the ability of the LSI-V to distinguish between early termination cases and cases presenting any file evidence of recidivism was .66 (Eta) and .70 for LSI-VI. Table A1 presents the predictive validity estimates for each item on LSI-VI (Tau) and for the subtotals (Eta). Also presented are the item-subtotal and subtotal-total correlations.

Subtotal Criminal History shows reasonable degrees of internal consistency, moderate predictive validity, and the text presented evidence for its concurrent validity in relation to a self-reported criminal past.

Subtotal Education/Employment appears satisfactory on all criteria and is the single strongest contributor to the predictability of recidivism.

Subtotal Financial is a relatively minor contributor to the predictability of recidivism but it is a significant factor in level of supervision decisions.

Subtotal Family/Marital is weakened somewhat by the inclusion of LSI-V D24, but the scoring criteria for "D24" has been changed for LSI-VI.

Subtotal Accommodation is a relatively minor contributor to the prediction of recidivism. The weak internal consistency estimate for the "Address Changes" item may be traced to the fact that the item did not appear on LSI-IV.

Leisure/Recreation, a brief two-item subtotal, obviously is tapping some highly significant information. In theory, this subtotal is an important one with reference to balancing Education/Employment. For many persons, including some by deliberate choice, there are "constructive, creative, rewarding" alternatives to traditional employment as a major source of anticriminal satisfactions.

Subtotal Companions was, along with Criminal History, the "next best" predictor relative to Education/Employment. An item-analysis confirmed our interim suspicions that the "social isolate" item best fits with the Emotional/Personal subset but, for convenience in interviewing, it remains part of Companions on LSI-VI.

The relatively poor performance of Alcohol/Drugs was, I think, a surprise to many of the Ottawa officers. However, those alcohol items which performed most poorly in the probation sample, performed relatively well in Bonta's sample. Moreover, the items continue to have high face validity for the officers.

The Emotional/Personal subtotal performed above expectations. The

user should note that the single "Psychological Assessment" item represents a review of a number of characteristics of probationers which, under some circumstances can be highly relevant to criminality. For future investigation, this author suspects that the Emotional/Personal subtotal will be of particular significance in predicting the recidivism of probationers who do not present extensive records of criminal behaviour.

Subtotal Probation Conditions was not expected to be a particularly strong predictor. Rather, it is an important component of the record that a comprehensive assessment has been conducted. Note that when early evidence of failure to comply is available, the probability of an unsatisfactory outcome is very high.

Subtotal Attitudes/Orientation is, and deliberately so, one of the more subjective elements of the LSI. Overall, it is functioning. Officers rarely check the items in this set, but when they do, the probability of recidivism is very high.

Several step-wise multiple regressions were conducted with the LSI-V data. Statistical weights of the subtotals yielded a multiple correlation of .60 relative to a single Pearson correlation coefficient of .57 (early termination versus any evidence of recidivism, n = 219).

Statistical weighting of 10 items (selected in a step-wise fashion) yielded a multiple correlation of .56 relative to a single Pearson correlation of .50 (all "closures" versus any evidence of recidivism, n = 420). The ten items: few anticriminal friends; less than Grade 10; poor attitude toward supervision; three or more prior convictions (adult); drugs ever a problem; criminal friends; any prior convictions; never employed for a 12 month period; two or more prior convictions (adult); and, unmarried (legal).

When and if the time comes when the agency requires not a general purpose assessment instrument but a brief, predictive scale, relevant items are already present on the LSI.

Table A2 allows an inspection of the stability of the predictive validity estimates as a function of the age, sex and criminal history of probationers across the two Ottawa offices. The estimates are relatively stable but note how office policy may influence results in the case of "Inprogram status" ("Closed"; "Active"; "Charges Pending"). Office Two, unlike Office One, rarely employed administrative closure and privileged reporting. Note as well, that the LSI was not predicting the disposition for reconvictions among probationers with a previous criminal record.

Table A1

The LSI-VI Items: The Predictive Validity of Individual Items[a] and Item-Subtotal Intercorrelations

	Eta (n=219)	Prop. Rec. (f)	Number Checked	Part-Whole Correlations r (n=598)	r^b
A. Criminal History	.44	--- (--)	--	.59	.43
1. Any Prior Convictions, Adult ( )	.24	.75 (64)	85	.66	.35
2. Two or more	.20	.78 (40)	51	.39	.14
3. Three or more	.21	.94 (17)	18	.32	.16
4. Three or more present offences ( )	.11	.76 (19)	25	.64	.43
5. Juvenile record	.31	.90 (43)	48	.49	.23
6. Ever incarcerated upon conviction	.17	.77 (34)	44	.73	.54
7. Escape history (institution)	.13	1.00 (6)	6	.35	.25
8. More than one misconduct (institution)	.11	1.00 (4)	4	.27	.21
9. Charged during prior community supervision	.22	1.00 (15)	15	.47	.32
10. Official record of assault/violence	.18	.87 (20)	23	.48	.28
B. Education/Employment	.54	--- (--)	--	.79	.57
11. Currently unemployed	.36	.82 (73)	89	.81	.74
12. Frequently unemployed	.34	.91 (48)	53	.64	.54
13. Never employed for full year	.34	.82 (66)	80	.53	.39
14. Ever fired	.16	.79 (26)	33	.41	.29

Table A1 (Cont'd)

	Eta (n=219)	Prop. Rec.	(f)	Number Checked	Part-Whole Correlations r (n=598)	r^b
15. Less than Grade 10	.32	.80	(71)	89	.46	.32
16. Less than regular Grade 12	.27	.68	(113)	166	.38	.23
17. Suspended or expelled at least once	.24	.81	(43)	53	.31	.17
18. Participation/ Performance ( )	.28	.75	(77)	102	.80	.72
19. Peer Interactions ( )	.31	.78	(72)	92	.84	.78
20. Authority Interactions ( )	.34	.79	(79)	100	.82	.75
. Financial	.25	---	(--)	---	.49	.42
21. Problems ( )	.14	.73	(38)	52	.77	.23
22. Reliance upon social assistance	.20	.76	(50)	66	.80	.23
. Family/Marital	.35	---	(--)	--	.55	.45
23. Dissatisfaction with marital situation	.09(ns)	.65	(68)	104	.54	.07 (ns)
24. Nonrewarding, parental	.30	.79	(70)	89	.70	.32
25. Nonrewarding, other relatives	.18	.78	(35)	45	.65	.37
26. Criminal (Family/ Spouse)	.25	.86	(36)	42	.49	.13

Table A1 (Cont'd)

	Eta (n=219)	Prop. Rec.	(f)	Number Checked	Part-Whole Correlations r (n=598)	r^b
E. Accommodation	.25	---	(--)	--	.46	.38
27. Unsatisfactory ( )	.05(ns)	.67	(22)	33	.64	.27
28. 3 or more address changes last year ( )	.24	.92	(24)	26	.46	.05(ns)
29. High crime neighbourhood	.11	.71	(30)	42	.62	.18
F. Leisure/Recreation	.37	---	(--)	--	.52	.44
30. Never any organized participation	.28	.80	(57)	71	.81	.35
31. Could make better use of time ( )	.32	.79	(72)	91	.83	.35
G. Companions	.45	---	(--)	--	.60	.51
32. A social isolate	.13	.90	(9)	10	.14	-.10
33. Some criminal acquaintances	.31	.74	(91)	123	.73	.32
34. Some criminal friends	.33	.78	(80)	103	.71	.32
35. Few anticriminal acquaintances	.18	.89	(17)	19	.46	.23
36. Few anticriminal friends	.26	.93	(27)	29	.56	.32
H. Alcohol/Drug Problems	.28	---	(--)	--	.60	.51
37. Alcohol, ever	.12	.70	(44)	63	.71	.56
38. Drugs, ever	.28	.83	(50)	60	.58	.40
39. Alcohol, currently ( )	.00(ns)	.61	(17)	28	.62	.50
40. Drugs, currently ( )	.27	.96	(25)	68	.46	.33

Table A1 (Cont'd)

	Eta (n=219)	Prop. Rec.	(f)	Number Checked	Part-Whole Correlations r (n=598)	r^b
41. Law violations	.13	.71	(48)	68	.74	.60
42. Marital/Family	.05(ns)	.67	(24)	36	.63	.50
43. School/Work	.22	.89	(24)	27	.63	.51
44. Medical	.13	.90	(9)	10	.42	.31
45. Loss of Control/ Frequency	.17	.81	(25)	31	.56	.43
I. Emotional/Personal	.37	---	(--)	--	.43	.32
46. Moderate interference	.24	.80	(45)	56	.71	.37
47. Severe interference	.13	.90	(9)	10	.42	.27
48. Psychiatric treatment, past	.28	.94	(30)	32	.69	.39
49. Psychiatric treatment, current	.15	.92	(11)	12	.55	.31
50. Psychological Assessment indicated	.17	.82	(23)	28	.57	.26
J. Probation Conditions	.25	---	(--)	--	.37	.29
51. Improvement indicated	.25	.84	(38)	45	.86	.44
52. On _____	.22	.81	(36)	44	.89	.54
53. On _____	.15	.84	(16)	19	.85	.65
54. On _____	.13	1.00	(6)	6	.62	.46
K. Attitudes/Orientation	.31	---	(--)	--	.44	.36
55. Supportive of crime	.20	.90	(19)	21	.68	.41
56. Unfavourable toward convention	.22	.95	(19)	20	.67	.38
57. Poor, toward sentence	.18	.87	(20)	23	.70	.42
58. Poor, toward supervision	.21	.91	(21)	23	.73	.48
TOTAL	.70					

[a] Early Termination versus Reconvictions

[b] Subtotal does not include corresponding item.

Table A2

The Stability of Selected Predictive Validity Estimates by Office and by Probationer Characteristics

	Outcome Status (8 Levels) (n)	Official Outcomes (5 Levels) (n)	Inprogram Status (3 Levels) (n)	Disposition (3 Levels) (n)	LSI-VI Mean(SD)
Total Sample	.47 (561)	.53 (265)	.43 (296)	.37 (76)	11.29 (7.47)
[Mean/(SD)]	[2.58/1.96]	[1.32/1.36]	[.81/.67]	[1.25/.75]	
Office					
One	.45 (235) [2.98/1.78]	.59 (109) [1.44/1.35]	.27 (126) [1.09/.43]	.46 (31) [1.39/.71]	11.24 (7.52)
Two	.51 (326) [2.29/2.03]	.51 (156) [1.24/1.36]	.54 (170) [.61/.73]	.34 (45) [1.16/.77]	11.33 (7.45)
Sex					
Men	.44 (404) [2.68/1.98]	.51 (217) [1.41/1.39]	.38 (247) [.83/.66]	.40 (68) [1.28/.73]	11.46 (7.37)
Women	.62 (97) [2.08/1.77]	.60 (48) [.90/1.11]	.66 (49) [.71/.68]	.32 (8) [1.00/.93]	10.47 (7.96)
Age					
21 years or younger	.50 (326) [2.81/2.05]	.54 (155) [1.50/1.45]	.48 (171) [.89/.67]	.39 (55) [1.27/.75]	11.65 (7.69)
22 years or older	.44 (219) [2.20/1.77]	.50 (105) [1.06/1.18]	.37 (114) [.67/.63]	.29 (20) [1.20/.77]	10.60 (7.07)
Prior Convictions (Adult)					
None	.50 (353) [2.34/1.88]	.57 (172) [1.12/1.25]	.39 (181) [.75/.65]	.59 (40) [1.15/.70]	9.38 (7.06)
Some	.40 (208) [2.98/2.02]	.40 (93) [1.69/1.47]	.46 (115) [.91/.68]	.08 (36) [1.36/.80]	14.44 (7.06)